

### **REMARKS**

Applicant appreciates the Examiner's thorough consideration provided the present application. Claims 1-13 are now present in the application. Claims 1, 5, 7-9 and 11 have been amended. Claims 1 and 13 are independent. Reconsideration of this application, as amended, is respectfully requested.

### **Reasons For Entry Of Amendments**

As discussed in greater detail hereinafter, Applicant respectfully submits that the rejections under 35 U.S.C. § 112 and 103 are improper and should immediately be withdrawn. Accordingly, the finality of the Final Office Action mailed on May 16, 2006 should be withdrawn.

In particular, the amendments to claims 1, 5, 7-9 and 11 are simply made to clarify the present invention without introducing any new issue. If the Examiner persists in maintaining his rejections, Applicant submits that this Amendment was not presented at an earlier date in view of the fact that Applicant is responding to a new ground of rejection set forth in the Final Office Action. In accordance with the requirements of 37 C.F.R. §1.116, Applicant respectfully requests entry and consideration of the foregoing amendments as they remove issues for appeal.

### **Allowable Subject Matter**

The Examiner has indicated that independent claim 13 is allowed and dependent claims 10-12 would be allowable if rewritten to include all of the limitations of the base claim and any

intervening claims. Applicant greatly appreciates the indication of allowable subject matter by the Examiner.

### **Claim Rejections Under 35 U.S.C. §112**

Claim 9 stands rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the enablement requirement. This rejection is respectfully traversed.

In particular, the specification from page 7, line 18 through page 8, line 14 specifically describes how to obtain the control value for generating the desired optical power, as follows:

The microcomputer 30 applies a predetermined DAC value to the DAC 102, and measures a laser power generated by an output voltage of the RF IC 10. Based on the offset value for a reference optical power stored in the EEPROM, the predetermined DAC value, and the laser power generated by the predetermined DAC value, the microcomputer 30 calculates a DAC value for outputting a laser power of 1mW at step S15. The microcomputer 30 applies the calculated DAC value to the DAC 102 to generate a laser power of 1mW.

In this case, the DAC value for generating the laser power of 1mW can be calculated by the following Equation 3:

[Equation 3]

$$DAC_{1mW} = DAC_{offset} + \frac{1mW}{P_1} \times (DAC_1 - DAC_{offset})$$

where “ $DAC_{1mW}$ ” is a DAC value at which a laser power of 1mW is generated;  
“ $DAC_{offset}$ ” is a DAC value at an offset point;  
“ $DAC_1$ ” is a predetermined DAC value applied to the DAC 102 to obtain the variable “ $DAC_{1mW}$ ”; and  
“ $P_1$ ” is a laser power value detected when applying a value of the “ $DAC_1$ ” to the DAC 102.

As stated above, a DAC value for generating a laser power of 1mW can be set up on the basis of an offset value for a reference optical power.

For example, assuming the DAC value  $DAC_{1mW}$  for generating the laser power of 1mW needs to be calculated, a predetermined DAC value  $DAC_1$  is inputted, and the laser power  $P_1$  generated based on the predetermined DAC value  $DAC_1$  is measured. Since the  $DAC_{offset}$  is obtained in advanced according to the method as recited in claim 1,  $DAC_{1mW}$  for generating the laser power of 1mW can be obtained by interpolation, which is shown in the Equation 3. In particular, as shown in FIG. 2, the relationship between the power and the DAC value is substantially linear. Since  $DAC_{offset}$ ,  $DAC_1$ ,  $P_1$  and the desired power 1mW are known, one skilled in the art would understand how to obtain the DAC value  $DAC_{1mW}$  by interpolation based on the Equation 3. To further illustrate the feature of the interpolation, the Equation 3 can be shown in another form as follows:

$$(DAC_{1mW} - DAC_{offset})/1mW = (DAC_1 - DAC_{offset})/P_1$$

Therefore, the DAC value  $DAC_{1mW}$  for generating the laser power of 1mW,  $DAC_{1mW} = DAC_{offset} + 1mW / P_1 \times (DAC_1 - DAC_{offset})$ , is obtained.

Accordingly, the specification clearly describes how to obtain the control value for generating the desired optical power so as to enable one skilled in the art to enable the present invention. Therefore, claim 9 complies with the written description and the enablement requirements. Reconsideration and withdrawal of the rejection under 35 U.S.C. § 112, first paragraph, are therefore respectfully requested.

### **Claim Rejections Under 35 U.S.C. § 103**

Claims 1-8 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Masaki et al., U.S. Patent No. 5,732,055 (hereinafter "Masaki"), in view of Applicant's Disclosure in FIG. 2 (hereinafter "Applicant's Disclosure"). This rejection is respectfully traversed.

A complete discussion of the Examiner's rejection is set forth in the Office Action, and is not being repeated here.

In particular, Applicant respectfully submits that the features of previously presented claim 1 clearly define over the teachings of the utilized references. While not conceding to the Examiner's rejection, but merely to clarify the present invention, as the Examiner will note, independent claim 1 has been amended to recite a combination of steps including "increasing a control value of a driving signal generator for driving a pickup unit to output an optical power until the driving signal generator starts to generate a driving voltage" and "setting the increased control value at which the driving signal generator starts to generate the driving voltage as an offset value for setting up a desired optical power of the pickup unit."

Support for the above combination of steps can be found in FIGs. 5 and 7 as originally filed. Applicant respectfully submits that the combination of steps as set forth in amended independent claim 1 is not disclosed or suggested by references relied on by the Examiner.

Masaki discloses an optical storage apparatus. In particular, Masaki in FIG. 12 discloses a flowchart for a light emission coarse adjusting process for erasing. Although Masaki in FIG. 12 discloses increasing the EP current DAC register (140) value  $y$  so as to obtain the measurement power  $x_1=2\text{mW}$  and  $(x_1, y_1)$  and to obtain the *measurement power*  $x_2=4\text{mW}$  and  $(x_2, y_2)$ . By doing so, the linear line shown in FIG. 13 is obtained, including the inclination  $a_1$

and the y-axis intersection b1 (see S1, S3 and S5 of FIG. 12). Therefore, the y-axis intersection b1 (i.e., the DAC value when the erasing power is zero) is obtained by extrapolation. Unlike Masaki, the control value of the present invention is increased *until the driving signal generator starts to generate the driving voltage*. Therefore, Masaki fails to teach “increasing a control value of a driving signal generator for driving a pickup unit to output an optical power until the driving signal generator starts to generate a driving voltage” as recited in claim 1.

Applicant's Disclosure also fails to cure the deficiencies of Masaki. As shown in FIG. 2, on page 2, lines 21-27, and on page 3, lines 8, the DAC offset value is also obtained by extrapolation. In particular, to obtain the DAC offset value, Applicant's Disclosure discloses that inputting two predetermined DAC values DAC1 and DAC2 and measuring the laser power levels P1 and P2 corresponding to DAC1 and DAC2 to obtain the linear relationship shown in FIG. 2. After the linear relationship shown in FIG. 2 is obtained, the DAC offset value is obtained by extrapolation according to the Equation 1. Therefore, Applicant's Disclosure also fails to teach “increasing a control value of a driving signal generator for driving a pickup unit to output an optical power until the driving signal generator starts to generate a driving voltage” as recited in claim 1.

In the alternative, neither of Masaki and Applicant's Disclosure teaches “setting the increased control value at which the driving signal generator starts to generate the driving voltage as an offset value for setting up a desired optical power of the pickup unit” as recited in claim 1.

The Examiner has correctly acknowledged that Masaki fails to teach “setting the increased control value at which the driving signal generator starts to generate the driving

voltage as an offset value for setting up a desired optical power of the pickup unit” as recited in claim 1. However, the Examiner alleged that Applicant’s Disclosure in FIG. 2 and paragraphs 0005-0009 teaches this feature. Applicant respectfully disagrees. As mentioned, Applicant’s Disclosure in FIG. 2 and paragraphs 0005-0009 simply discloses inputting two predetermined DAC values DAC1 and DAC2 and measuring the laser power levels P1 and P2 corresponding to DAC1 and DAC2, and then obtaining the DAC offset value *by extrapolation*, not by setting the DAC offset value to be the *increased control value* at which the driving signal generator starts to generate the driving voltage. In fact, the DAC offset value is always *lower* than DAC1 and DAC2. Accordingly, Applicant’s Disclosure fails to teach “setting the *increased control value* at which the driving signal generator starts to generate the driving voltage as an offset value for setting up a desired optical power of the pickup unit” as recited in claim 1.

Accordingly, neither Masaki nor Applicant’s Disclosure individually or in combination teaches or suggests the above-noted features of independent claim 1. Therefore, Applicant respectfully submits that independent claim 1 and its dependent claims (at least due to their dependency) clearly define over the teachings of the utilized references. Accordingly, reconsideration and withdrawal of the rejection under 35 U.S.C. § 103 are respectfully requested.

#### **Additional Cited References**

Since the remaining patents cited by the Examiner have not been utilized to reject the claims, but rather to merely show the state of the art, no further comments are necessary with respect thereto.

**CONCLUSION**

All the stated grounds of rejection have been properly traversed and/or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider all presently pending rejections and that they be withdrawn.

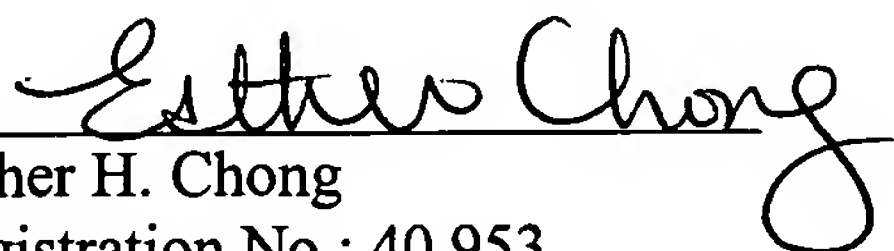
It is believed that a full and complete response has been made to the Office Action, and that as such, the Examiner is respectfully requested to send the application to Issue.

In the event there are any matters remaining in this application, the Examiner is invited to contact the undersigned at (703) 205-8000 in the Washington, D.C. area.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§1.16 or 1.17; particularly, extension of time fees.

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Respectfully submitted,

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